

# TA-H4900

## SERVICE MANUAL

AEP Model

UK Model

E Model

Australian Model



Photo : AEP model

TA-H4900 is the Integrated stereo amplifier section in MHC-4900/E80X

### SPECIFICATIONS

<b>Peak music power output</b> (E, EA, MX, AUS, SP, MY model)	1000 watts, 6Ω
<b>Continuous RMS power output</b>	60 + 60 watts (6 ohms at 1 kHz, DIN) 70 + 70 watts (6 ohms at 1 kHz, 5% THD)
<b>Music power output</b>	140 + 140 watts (6 ohms at 1kHz, 10% THD)
<b>Inputs</b>	MIX MIC (minijack): sensitivity 1mV, impedance 600 ohms
<b>Outputs</b>	HEADPHONES (stereo minijack): accepts headphones of 8 ohms or more SURROUND SPEAKER (phono jack): accepts impedance of 8 to 16 ohms
<b>Dimensions</b>	Approx. 225 x 125 x 285 mm (w/h/d) (8 7/8 x 5 x 11 1/4 inches)
<b>Mass</b>	Approx. 4.3kg (9 lb 8 oz)

#### General

Desti- nation	Power requirements	Power consumption
UK model	240 V AC, 50 Hz	160 W
AEP, G, IT model	220 — 230 V AC, 50/60Hz	160W
E, EA, MX, AUS, SP, MY model	110 - 120 V or 220 - 240 VAC Adjustable 50/60 Hz	160 W

Design and specifications subject to change without notice.

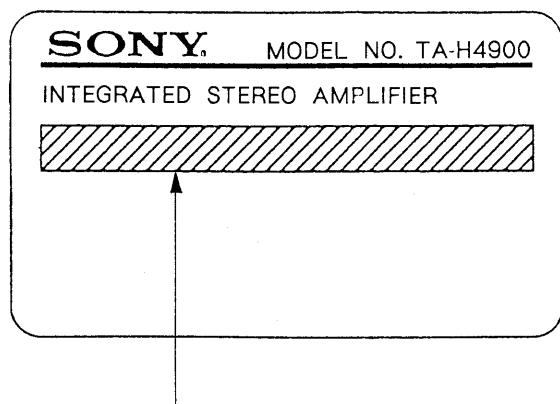
#### Note :

- G : German model.
- IT : Italian model.
- EA : Saudi Arabia model.
- MX : Mexican model.
- AUS : Australian model.
- SP : Singapore model.
- MY : Malaysia model.

**INTEGRATED STEREO AMPLIFIER**  
**SONY®**

## — MODEL IDENTIFICATION —

(Specification Label)



AEP model : AC : 220 – 230V ~ 50/60Hz 160W  
G, IT model : AC : 220 – 230V ~ 50Hz 160W  
UK model : AC : 240V ~ 50Hz  
E, EA, MX, AUS, SP, MY model : AC : 110 – 120V/220 – 240V ~  
50/60Hz 160W

### Note :

- G : German model.
- IT : Italian model.
- EA : Saudi Arabia model.
- MX : Mexican model.
- AUS : Australian model.
- SP : Singapore model.
- MY : Malaysia model.

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## SERVICE NOTE

### • Power Supply Used in Servicing

This unit have its own power supply as it works on the power supplied from the equalizer (SEQ-H4900) used for this series, connect this amplifier when servicing the unit (conduction repair, etc.).

### SAFETY-RELATED COMPONENT WARNING !!

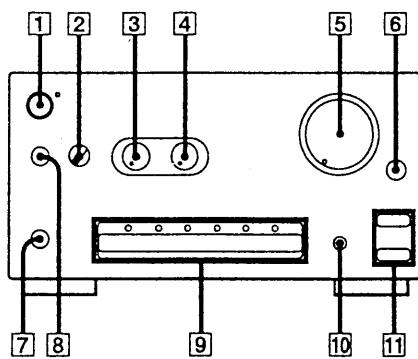
COMPONENTS IDENTIFIED BY MARK  $\Delta$  OR DOTTED LINE WITH MARK  $\Delta$  ON THE SCHEMATIC DIAGRAMS AND IN THE PARTS LIST ARE CRITICAL TO SAFE OPERATION. REPLACE THESE COMPONENTS WITH SONY PARTS WHOSE PART NUMBERS APPEAR AS SHOWN IN THIS MANUAL OR IN SUPPLEMENTS PUBLISHED BY SONY.

## SECTION 1

### GENERAL

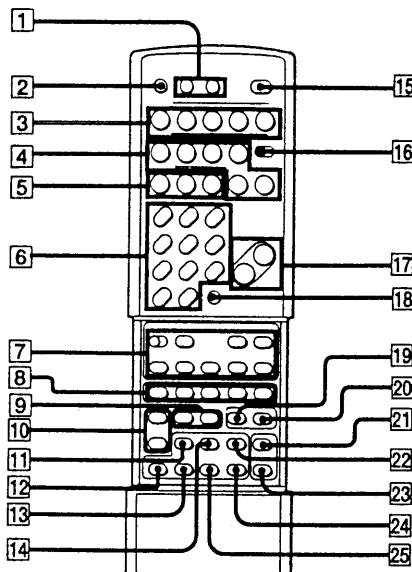
This section is extracted from  
instruction manual.

#### Front Panel



- [1] SYSTEM POWER switch and ON/STANDBY indicator (7)  
The indicator remains lit as long as the AC power cord is connected to a wall outlet.
- [2] MIC LEVEL control (25)
- [3] DBS FREQUENCY control (20)
- [4] DBS LEVEL control (20)
- [5] VOLUME control\* (5, 7, 20)
- [6] MUTING button\* (20)
- [7] HEADPHONES jack (stereo minijack) (20, 26)
- [8] MIX MIC jack (minijack) (25, 26)
- [9] FUNCTION INDICATOR (16, 25, 26)
  - VIDEO (26)
  - TAPE (19)
  - MD/DAT (26)
  - CD (16, 25)
  - TUNER (24)
  - PHONO (26)
- [10] Remote sensor
- [11] FUNCTION >/< buttons (16, 25, 26)

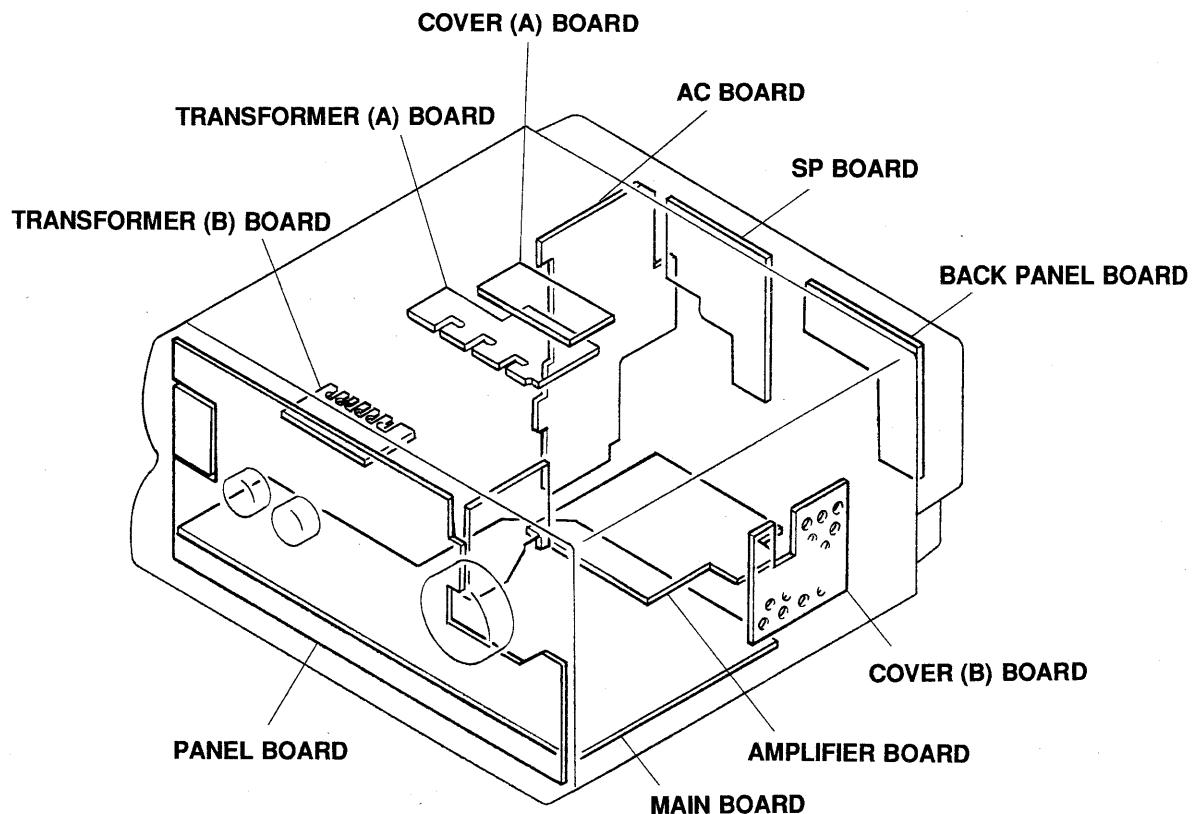
#### Remote commander (RM-S49/RM-S49E)



- [1] TAPE DECK A/B buttons (14)
- [2] SLEEP button (23)
- [3] CD/MD operating buttons (7)
- [4] Cassette deck operating buttons (14)
- [5] Tuner operating buttons (10)
- [6] CD/Tuner/numeric buttons (7, 11)
- [7] VCR operating buttons (26)
- [8] TV operating buttons (26)
- [9] MENU 1, 2 button (15, 20)
- [10] FUNCTION </> buttons (16, 25, 26)
- [11] CONTINUE button (8)
- [12] CHECK button (9)
- [13] CLEAR button (9)
- [14] SHUFFLE button (8)
- [15] SYSTEM POWER switch (7)
- [16] CD/MD switch (7)
- [17] VOLUME +/- buttons (7, 20)
- [18] MUTING button (20)
- [19] P.FILE button (22)
- [20] DIRECT button (15, 21)
- [21] RDS EON button (12)  
(AEP, UK, G, IT model) (RM-S49)
- [21] REC button (12)  
(E, EA, MX, AUS, SP, MY model) (RM-S49E)
- [22] PROGRAM button (8)
- [23] DISPLAY button (21)  
(AEP, UK, G, IT model) (RM-S49)
- [23] REC MUTE button (21)  
(E, EA, MX, AUS, SP, MY model) (RM-S49E)
- [24] TIME button (8)
- [25] REPEAT button (9)

## SECTION 2 DIAGRAMS

### 2-1. CIRCUIT BOARDS LOCATION

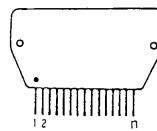


## 2-2. SEMICONDUCTOR LEAD LAYOUTS

**GP1U57XB**

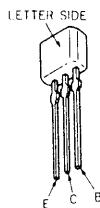


**STK4172MK2K**

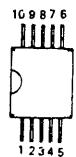


(MARKING SIDE VIEW)

**DTA124ES**



**LB1638**

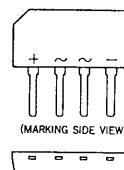


**TA7812S**



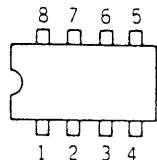
IN OUT  
GND

**D5SBA20F01**



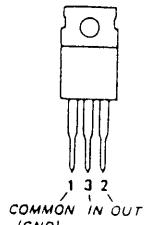
(MARKING SIDE VIEW)

**μPC393C**



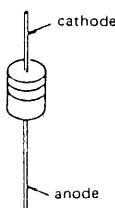
(Top view)

**TA7912S**



1 3 2  
COMMON IN OUT  
(GND)

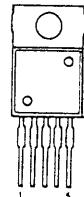
**UZL-15M  
11ES2**



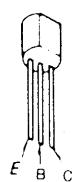
cathode

anode

**L78MR06**

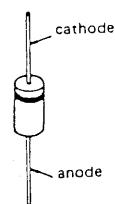


**2SB1116**



E B C

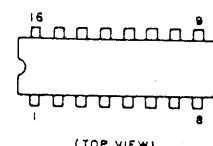
**10E2  
1N4148M**



cathode

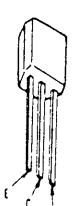
anode

**MC68HC05P9-SC405679B  
SN74HC138AN**

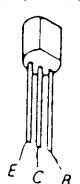


(TOP VIEW)

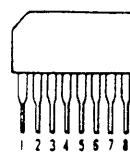
**2SC2603-EF  
2SC3622A-LK  
DTA144WS  
DTC124ES**



**2SC1841-PAFAEA**



**M5218AL  
μPC1237HA**



1 2 3 4 5 6 7 8

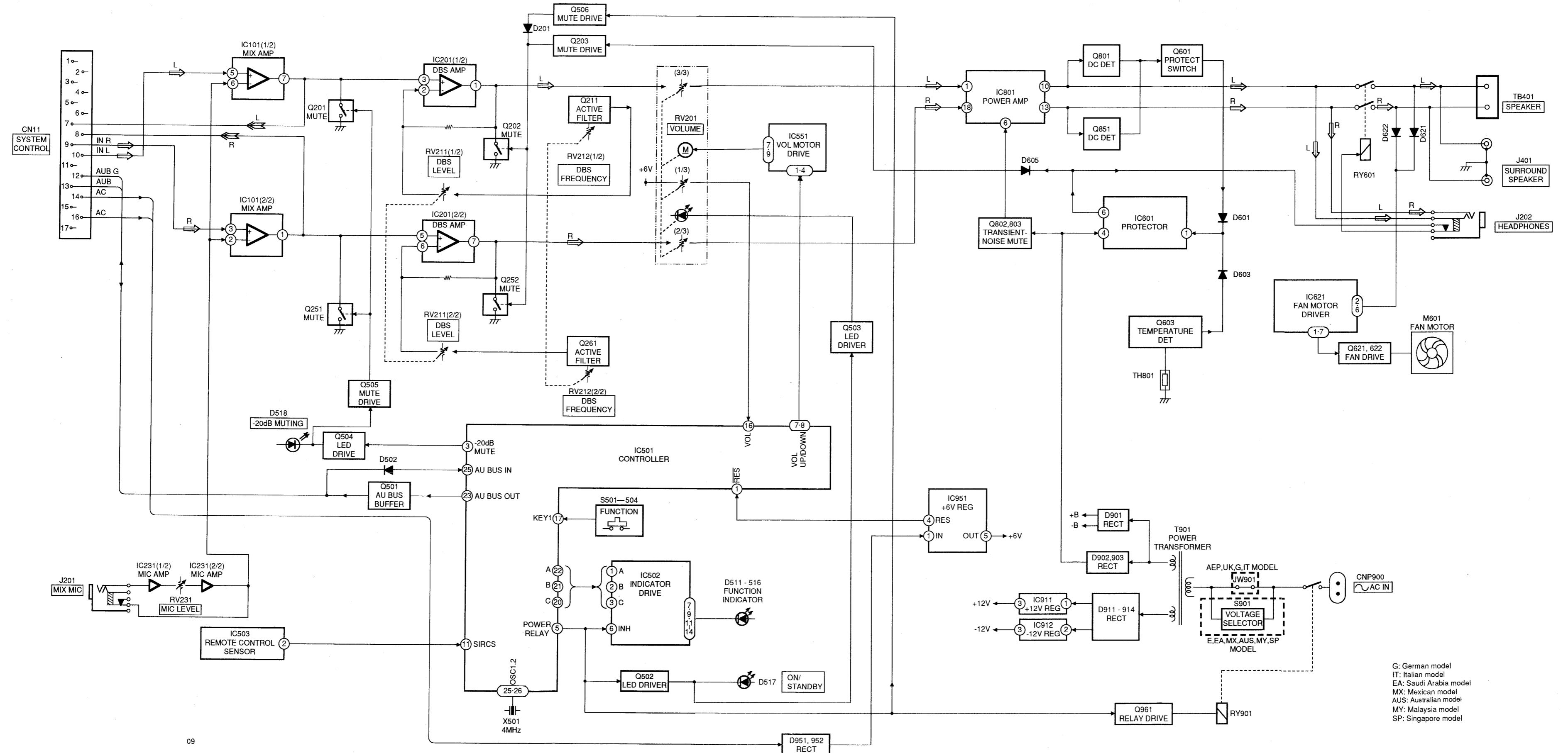
**SEL5220S**



K

A

## 2-3. BLOCK DIAGRAM



## 2-4. PRINTED WIRING BOARDS

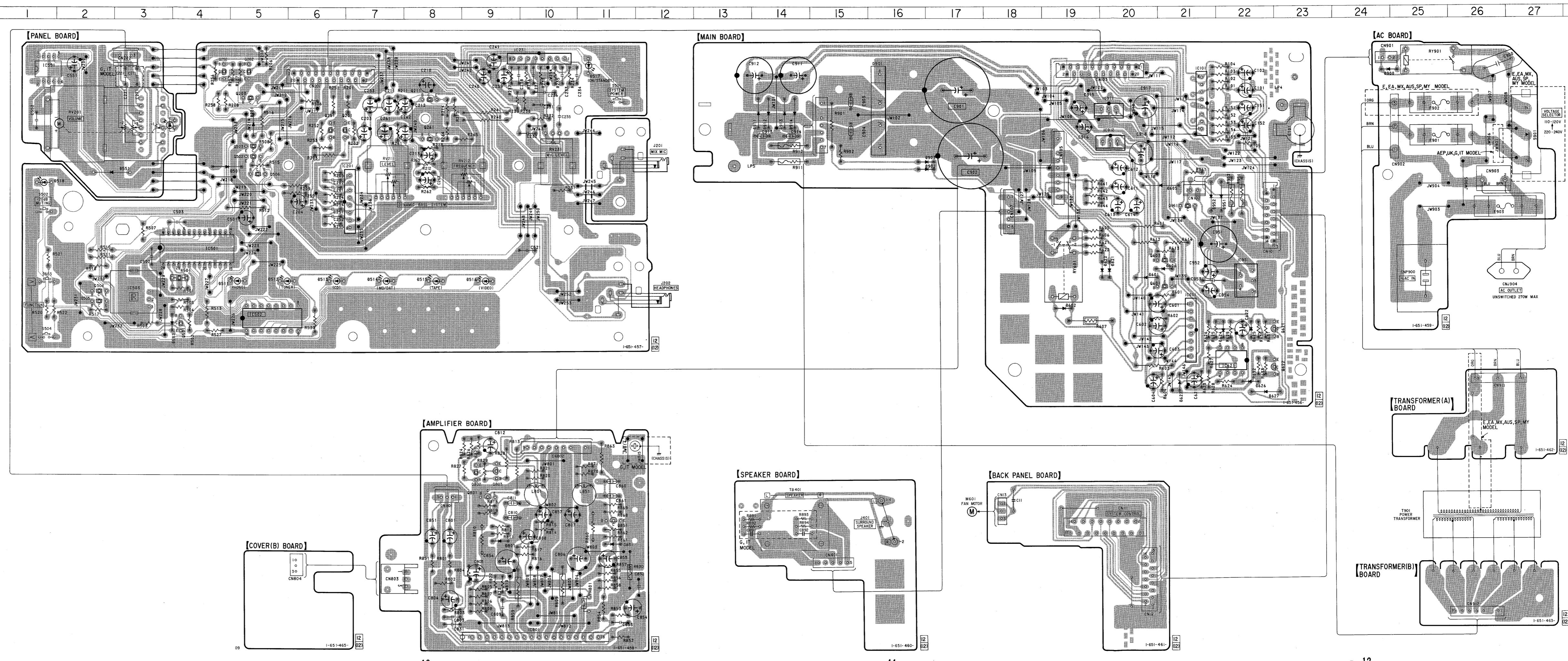
- See page 4 for Circuit Boards Location.
- See page 5 for Semiconductor Lead Layouts.

## • Semiconductor Location

Ref. No.	Location	Ref. No.	Location
D201	B-5	IC503	E-3
D501	C-5	IC551	A-1
D502	F-4	IC601	E-21
D511	E-4	IC621	F-22
D512	E-5	IC801	K-10
D513	E-6	IC911	B-20
D514	E-7	IC912	B-20
D515	E-8	IC951	E-22
D516	E-9		
D517	A-10	Q201	B-7
D518	C-2	Q202	A-5
D551	C-3	Q203	B-5
D601	E-20	Q211	B-8
D602	E-19	Q251	B-6
D605	C-21	Q252	A-4
D606	E-21	Q261	B-8
D621	E-20	Q501	F-4
D622	E-22	Q502	C-5
D623	G-21	Q503	C-5
D624	F-22	Q504	E-2
D625	F-22	Q505	E-2
D626	G-22	Q506	C-5
D627	G-22	Q601	E-20
D801	J-9	Q603	E-20
D851	J-11	Q621	F-23
D900	A-24	Q622	F-23
D901	A-16	Q801	I-9
D902	C-17	Q802	H-9
D903	C-17	Q803	H-9
D911	B-14	Q851	I-11
D912	B-14	Q961	D-21
D913	B-14		
D914	B-14		
D951	D-22		
D952	D-21		
IC101	A-21		
IC201	C-7		
IC231	A-9		
IC501	D-4		
IC502	F-5		

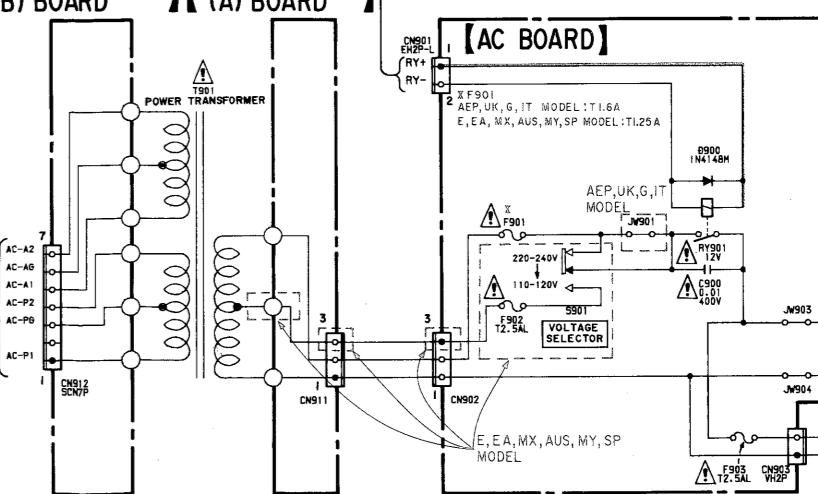
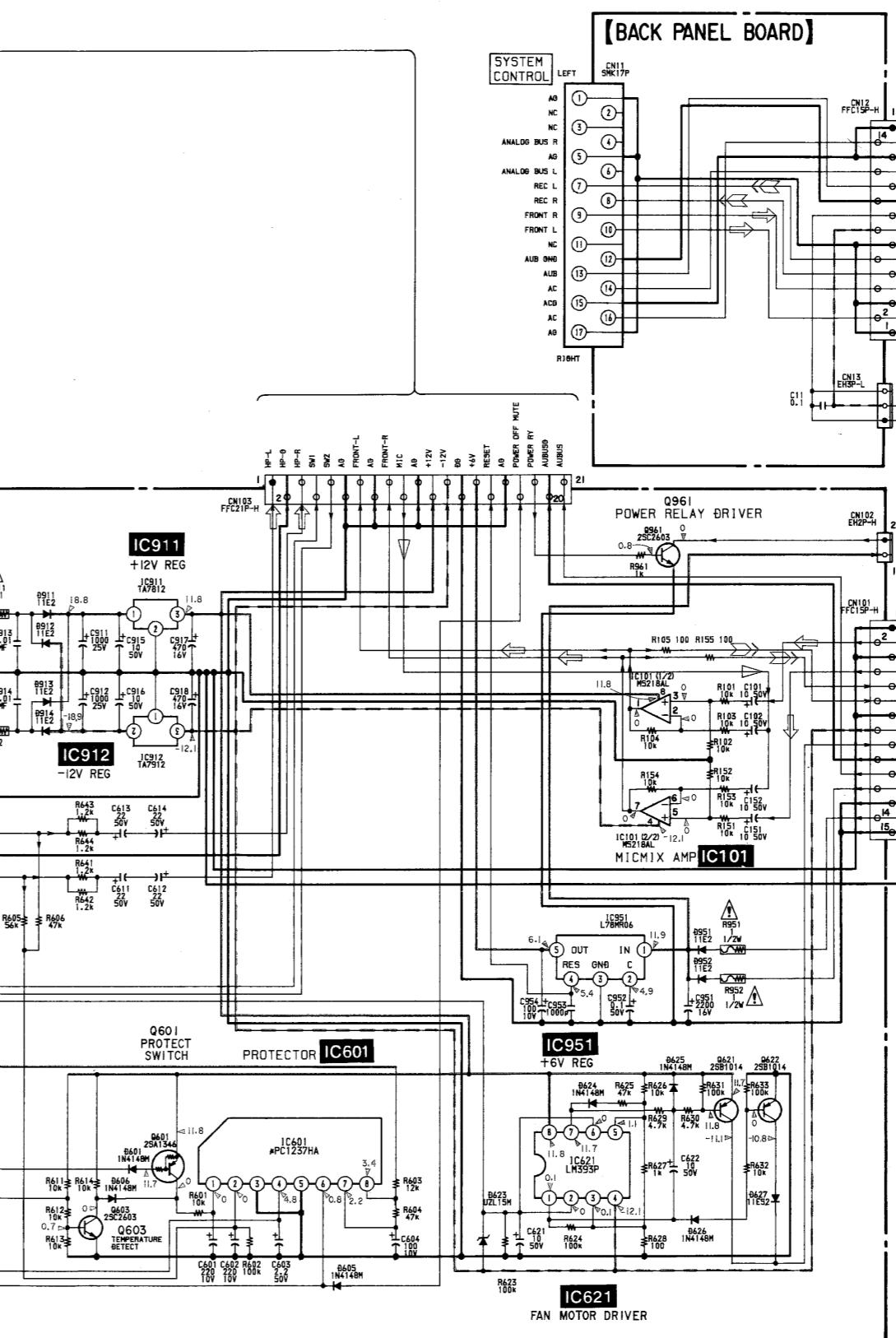
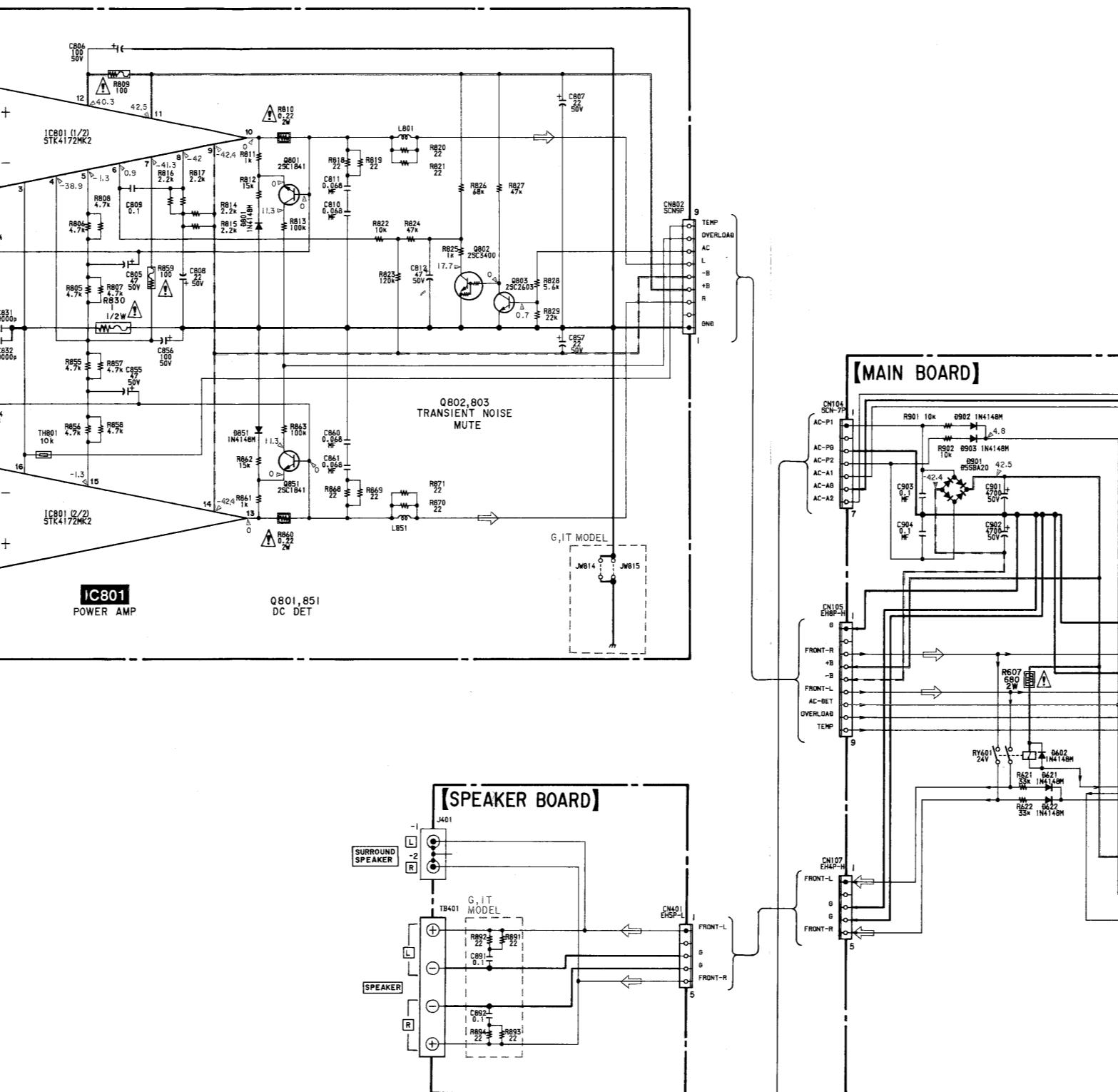
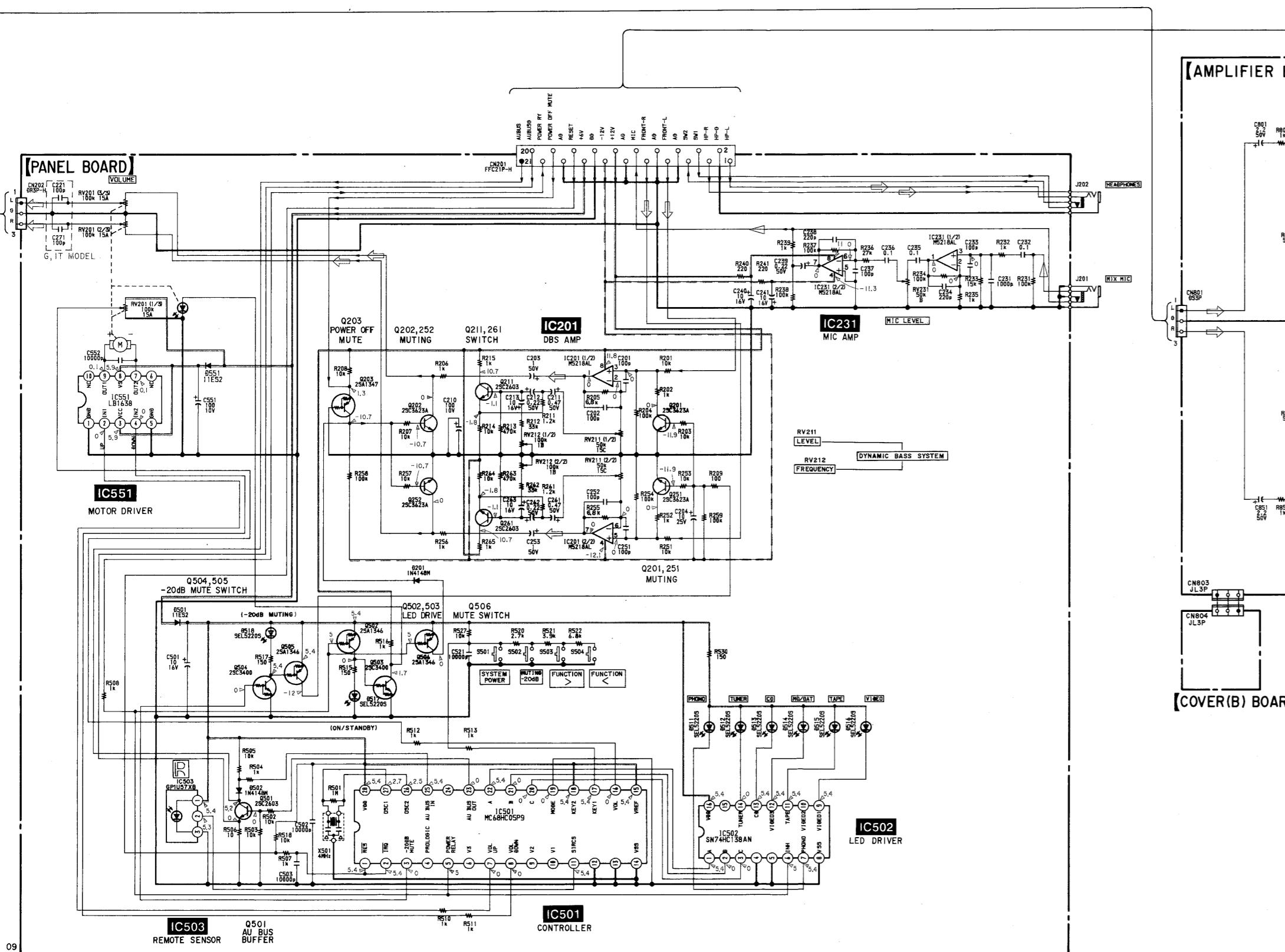
Note:  
 • : parts extracted from the component side.  
 • : indicates side identified with part number.  
 • : Pattern from the side which enable seeing.

• G : German model.  
 • IT : Italian model.  
 • EA : Saudi Arabia model.  
 • AUS : Australian model.  
 • SP : Singapore model.  
 • MY : Malaysia model.  
 • MX : Mexican model.



## -5 SCHEMATIC DIAGRAM

- See page 18, 19 for IC Block Diagrams.
  - See page 20 for IC Pin Functions. (IC501)



**Note:**

- All capacitors are in  $\mu\text{F}$  unless otherwise noted.  $\text{pF}:\mu\text{F}$  50WV or less are not indicated except for electrolytics and tantalums.
- All resistors are in  $\Omega$  and 1/4W or less unless otherwise specified.

- : internal component.
- : fusible resistor.
- : panel designation.

**Note:** The components identified by mark  $\Delta$  or dotted line with mark  $\Delta$  are critical for safety.  
Replace only with part number specified.

- : B+ Line
- : B- Line
- Voltage and waveforms are dc with respect to ground

- Voltages are taken with a VOM (Input impedance  $10\text{M}\Omega$ ). Voltage variations may be noted due to normal production under no-signal conditions.

- Signal path.  
➡ : PHONO

▶ : MIC  
▷▷ : REC

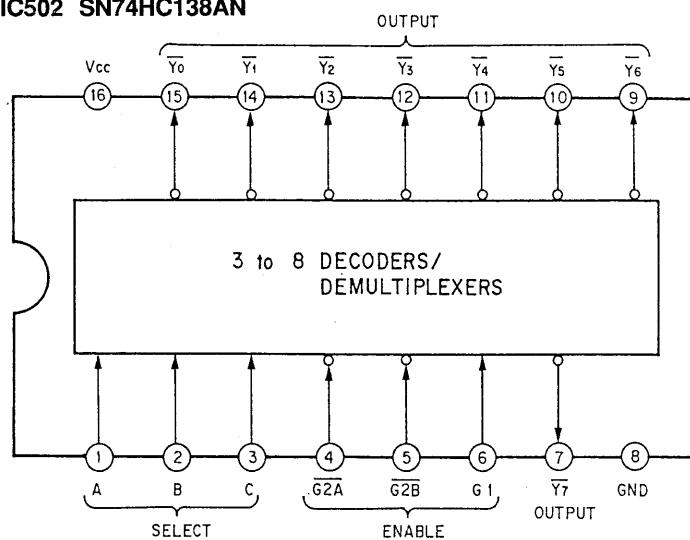
- G : German model.
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- AUS : Australian model.
- SP : Singapore model

- SG : Singapore model.
- MY : Malaysia model.
- MX : Mexican model.

## 2-6. IC BLOCK DIAGRAMS

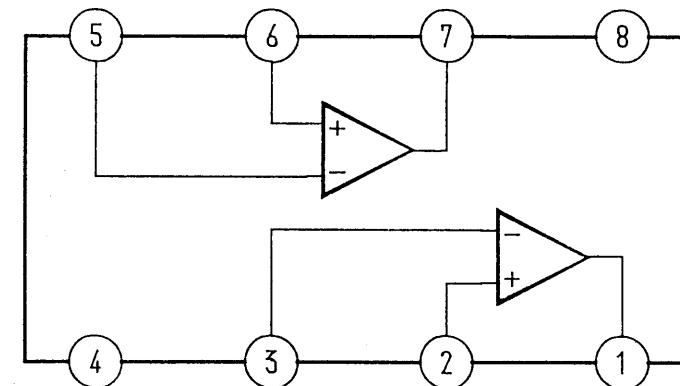
**IC502 SN74HC138AN**



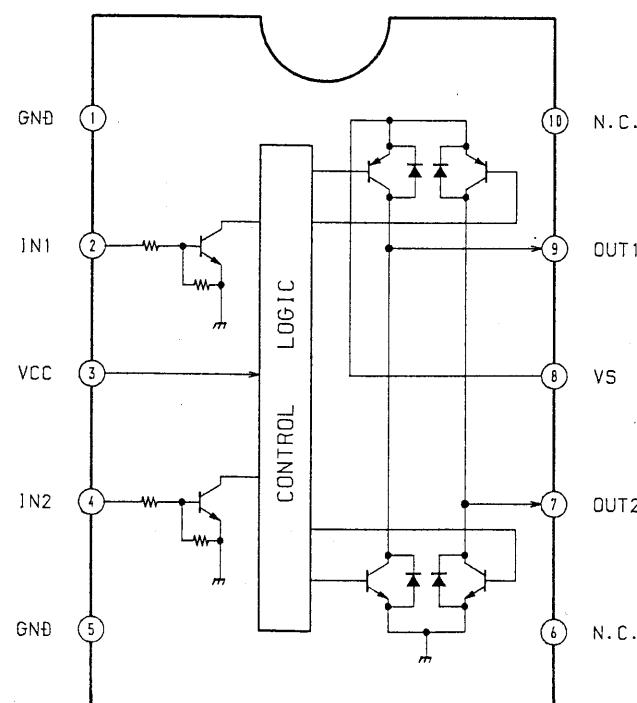
INPUTS		OUTPUTS												
ENABLE	SELECT	G1	G2*	C	B	A	Y0	Y1	Y2	Y3	Y4	Y5	Y6	Y7
X	H	X	X	X	H	H	H	H	H	H	H	H	H	H
L	X	X	X	H	H	H	H	H	H	H	H	H	H	H
H	L	L	L	L	H	H	H	H	H	H	H	H	H	H
H	L	L	H	H	L	H	H	H	H	H	H	H	H	H
H	L	L	H	H	H	L	H	H	H	H	H	H	H	H
H	L	L	H	H	H	H	L	H	H	H	H	H	H	H
H	L	H	H	H	H	H	H	L	H	H	H	H	H	H
H	L	H	H	H	H	H	H	H	L	H	H	H	H	H
H	L	H	H	H	H	H	H	H	H	H	L	H	H	H
H	L	H	H	H	H	H	H	H	H	H	H	L	H	H
H	L	H	H	H	H	H	H	H	H	H	H	H	L	H
H	L	H	H	H	H	H	H	H	H	H	H	H	H	L

$G2^* = G2A + G2B$

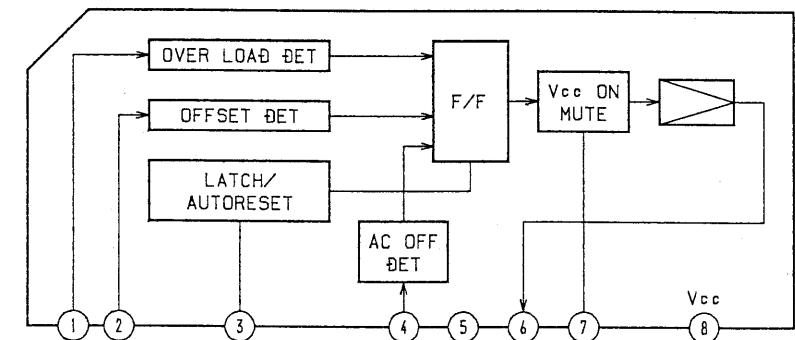
**IC621 LM393P**



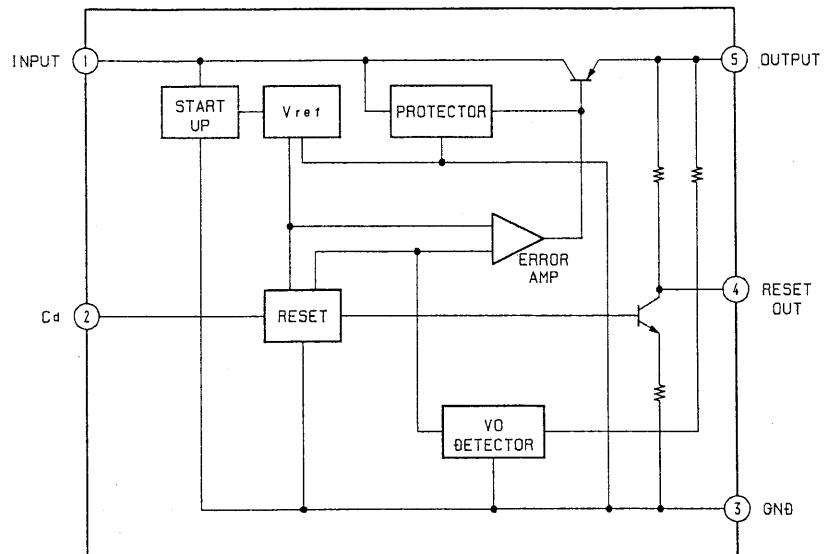
**IC551 LB1638**



**IC601 μPC1237HA**



**IC951 L78MR06**



## 2-7. IC PIN FUNCTIONS

- IC501 CONTROLLER (MC68HC05P9-SC405679B)

Pin No.	Pin Name	I/O	Function
1	RES	I	Reset input. Normally "H"
2	IRQ	I	Connected to RES
3	-20dB MUTE	O	Muting control. "H": Mute
4	PROLOGIC	O	Not used
5	POWER RELAY	O	Power relay control "H": ON
6	V3	O	Not used
7	VOL UP	O	Volume UP control output
8	VOL DOWN	O	Volume DOWN control output
9	V2	O	Not used
10	V1	O	
11	SIRCS	I	SIRCS data input
12	—	—	Not used
13	—	—	
14	VSS	—	GND
15	VREF	I	Reference voltage input +5V
16	VOL	I	Volume position detection input
17	KEY1	I	Key input
18	KEY2	I	Connected to +5V
19	MODE	I	Connected to GND
20	C	O	Function control output *1
21	B	O	
22	A	O	
23	AU BUS OUT	O	Audio bus output
24	—	—	Not used
25	AU BUS IN	I	Audio bus input
26	OSC2	I	System clock (4 MHz)
27	OSC1	O	
28	VDD	—	+5V

\* 1

FUNCTION	FUNCTION CONTROL		
	A	B	C
PHONO	H	H	H
TUNER	H	L	L
CD	L	H	L
TAPE	L	L	H
MD/DAT	H	H	L
VIDEO	L	H	H

**Note:** All output ports should be set to "L" at power off.

After power on, all output ports should be set to "L" until the AU BUS inputs a signal.

## SECTION 3

### EXPLODED VIEWS

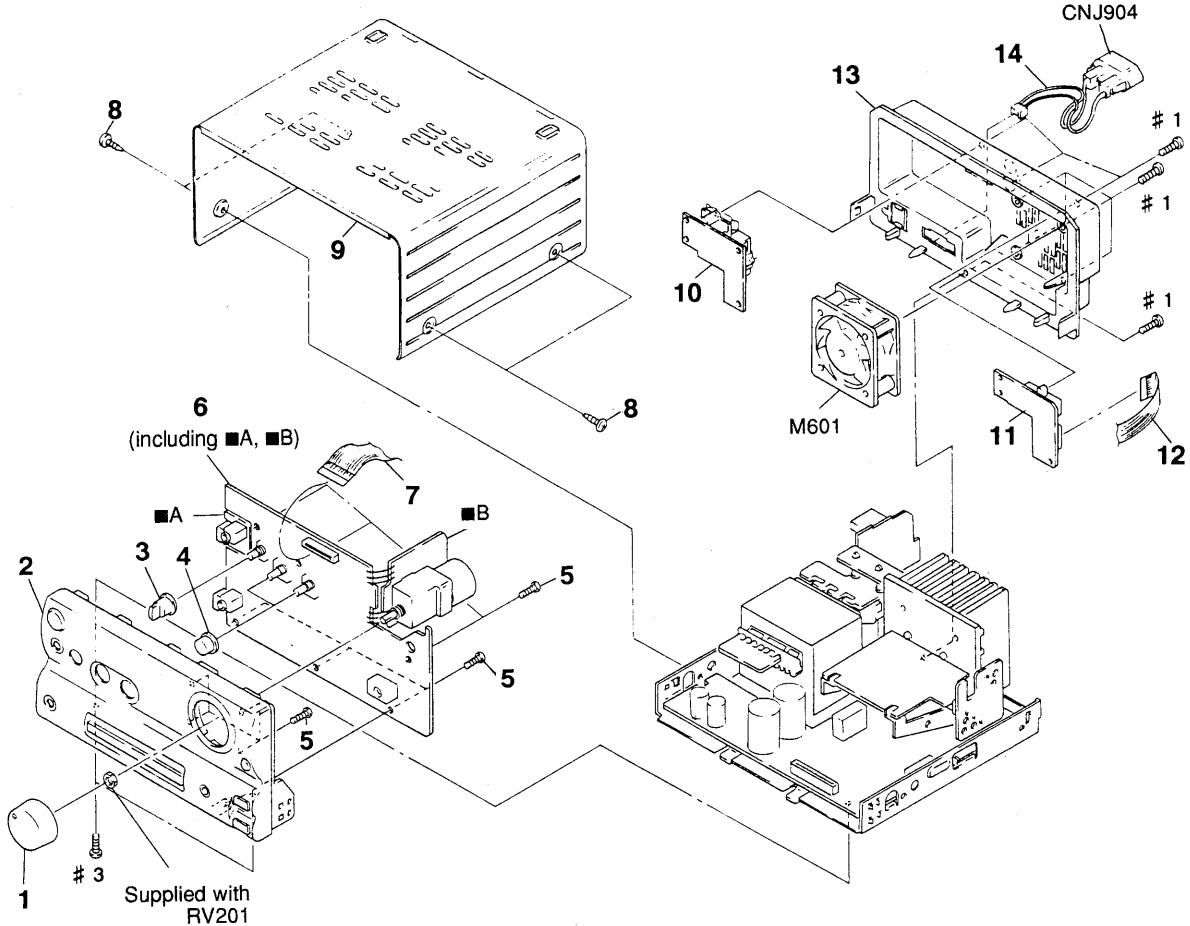
**NOTE:**

- Items marked “ \* ” are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- -XX, -X mean standardized parts, so they may have some difference from the original one.
- The mechanical parts with no reference number in the exploded views are not supplied.

- Hardware (# mark) list and accessories and packing materials are given in the last of this parts list.
- G : German model
- IT : Italian model
- EA : Saudi Arabia model
- MX : Mexican model
- AUS : Australian model
- SP : Singapore model
- MY : Malaysia model

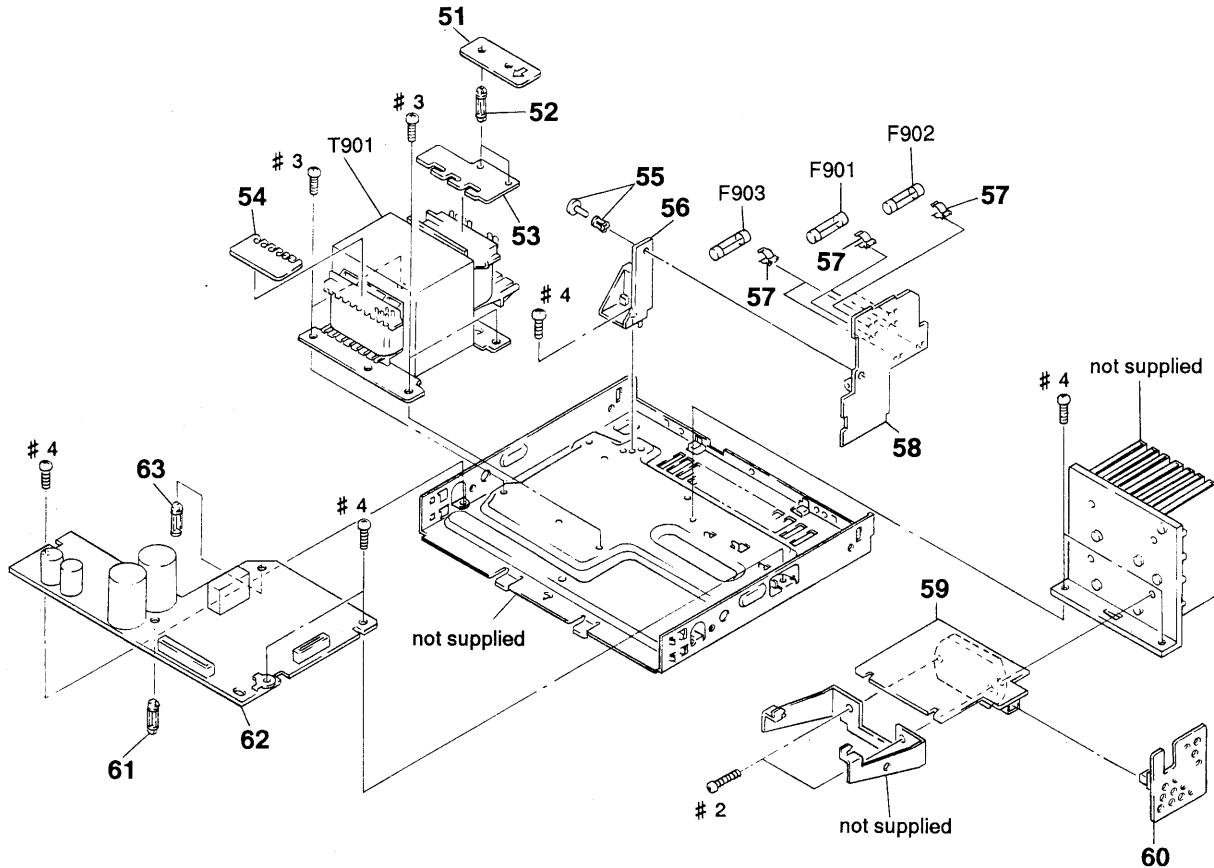
The components identified by mark  $\triangle$  or dotted line with mark  $\triangle$  are critical for safety.  
Replace only with part number specified.

#### 3-1. FRONT PANEL AND REAR PANEL SECTION



Ref. No.	Part No.	Description	Remark	Ref. No.	Part No.	Description	Remark
1	X-4944-094-1	KNOB (VOLUME) ASSY		8	3-363-099-21	SCREW (CASE 3 TP2)	
2	X-4944-647-1	PANEL ASSY, FRONT (AEP, UK, G, IT)		9	4-961-519-21	CASE	
2	X-4944-648-1	PANEL ASSY, FRONT (E, AUS, EA, MY, SP, MX)		* 10	1-651-460-11	SPEAKER BOARD	
3	4-961-911-11	KNOB (MICROPHONE)		* 11	1-651-461-11	BACK PANEL BOARD	
4	4-961-912-01	KNOB (DBFB)		12	1-765-192-11	WIRE (FLAT TYPE)(15 CORE)	
5	4-951-620-01	SCREW (2.6X8), +BVTP		* 13	4-954-256-81	PANEL, BACK (AEP, UK, G, IT)	
* 6	A-4369-243-A	PANEL BOARD, COMPLETE (AEP)		* 13	4-954-256-91	PANEL, BACK (E, AUS, EA, MY, SP, MX)	
* 6	A-4369-244-A	PANEL BOARD, COMPLETE (UK)		14	1-751-216-31	LEAD (WITH CONNECTOR)(2 CORE)	
* 6	A-4369-245-A	PANEL BOARD, COMPLETE (G, IT)		$\triangle$ CNJ904	1-526-794-11	OUTLET, AC	
* 6	A-4369-249-A	PANEL BOARD, COMPLETE (E, AUS, EA, MY, SP, MX)		M601	1-541-953-11	MOTOR, DC FAN	
7	1-765-194-11	WIRE (FLAT TYPE)(21 CORE)					

### 3-2. CHASSIS SECTION



The components identified by mark  $\triangle$  or dotted line with mark  $\triangle$  are critical for safety.  
Replace only with part number specified.

Ref. No.	Part No.	Description	Remark	Ref. No.	Part No.	Description	Remark
* 51	1-651-464-11	COVER (A) BOARD		* 61	3-682-419-71	HOLDER, PCB	
* 52	4-385-948-01	HOLDER, PCB		* 62	A-4369-239-A	MAIN BOARD, COMPLETE (AEP)	
* 53	1-651-462-11	TRANSFORMER (A) BOARD		* 62	A-4369-240-A	MAIN BOARD, COMPLETE (UK)	
* 54	1-651-463-11	TRANSFORMER (B) BOARD		* 62	A-4369-241-A	MAIN BOARD, COMPLETE (G, IT)	
55	4-812-134-11	RIVET NYLON, 3.5		* 62	A-4369-242-A	MAIN BOARD, COMPLETE (E, AUS, EA, MY, SP, MX)	
* 56	4-954-242-01	BRACKET (IN)		* 63	3-669-610-00	SPACER	
57	1-533-293-11	FUSE HOLDER		△F901	1-532-259-00	FUSE (T1. 6A) (AEP, UK, G, IT)	
* 58	1-651-459-11	AC BOARD		△F901	1-532-285-00	FUSE (T1. 25A) (E, AUS, EA, MY, SP, MX)	
* 59	A-4369-250-A	AMPLIFIER BOARD, COMPLETE (AEP)		△F902	1-532-286-00	FUSE (T2. 5A) (E, AUS, EA, MY, SP, MX)	
* 59	A-4369-251-A	AMPLIFIER BOARD, COMPLETE (UK)		△F903	1-532-286-00	FUSE (T2. 5A)	
* 59	A-4369-252-A	AMPLIFIER BOARD, COMPLETE (G, IT)		△T901	1-426-683-11	TRANSFORMER, POWER (AEP, G, IT)	
* 59	A-4369-253-A	AMPLIFIER BOARD, COMPLETE (E, AUS, EA, MY, SP, MX)		△T901	1-426-684-11	TRANSFORMER, POWER (UK)	
* 60	1-651-465-11	COVER (B) BOARD		△T901	1-426-685-11	TRANSFORMER, POWER (E, AUS, EA, MY, SP, MX)	

## SECTION 4

### ELECTRICAL PARTS LIST

**AC**    **AMPLIFIER**

**NOTE:**

The components identified by mark  $\triangle$  or dotted line with mark  $\triangle$  are critical for safety.  
Replace only with part number specified.

When indicating parts by reference number, please include the board name.

- Due to standardization, replacements in the parts list may be different from the parts specified in the diagrams or the components used on the set.
- Items marked "\*" are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- -XX, -X mean standardized parts, so they may have some difference from the original one.
- SEMICONDUCTORS  
In each case, u:  $\mu$ , for example:  
uA...:  $\mu$ A..., uPA...:  $\mu$ PA...,  
uPB...:  $\mu$ PB..., uPC...:  $\mu$ PC...,  
uPD...:  $\mu$ PD...
- CAPACITORS  
uF:  $\mu$ F
- COILS  
uH:  $\mu$ H
- RESISTORS  
All resistors are in ohms  
METAL: Metal-film resistor  
METAL OXIDE: Metal Oxide-film resistor  
F: nonflammable
- Hardware (# mark) list and accessories and packing materials are given in the last of this parts list.
- G : German model  
• IT : Italian model  
• EA : Saudi Arabia model  
• MX : Mexican model  
• AUS : Australian model  
• SP : Singapore model  
• MY : Malaysia model

Ref. No.	Part No.	Description	Remark	Ref. No.	Part No.	Description	Remark	
*	1-651-459-11	AC BOARD	*****	*	A-4369-250-A	AMPLIFIER BOARD, COMPLETE (AEP)	*****	
	1-533-293-11	FUSE HOLDER		*	A-4369-251-A	AMPLIFIER BOARD, COMPLETE (UK)	*****	
		< CAPACITOR >		*	A-4369-252-A	AMPLIFIER BOARD, COMPLETE (G, IT)	*****	
△C900	1-161-744-51	CERAMIC	0.01uF	400V	*	A-4369-253-A	AMPLIFIER BOARD, COMPLETE	(E, EA, MX, AUS, SP, MY)
		< CONNECTOR >				< CAPACITOR >		
CN901	1-564-517-11	PLUG, CONNECTOR 2P		C801	1-124-257-00	ELECT	2.2uF 20% 50V	
CN902	1-751-206-31	LEAD (WITH CONNECTOR) (2 CORE)		C803	1-162-282-31	CERAMIC	100PF 10% 50V	
		(AEP, UK, G, IT)		C804	1-124-910-11	ELECT	47uF 20% 50V	
CN902	1-765-186-21	LEAD (WITH CONNECTOR) (3 CORE)		C805	1-124-910-11	ELECT	47uF 20% 50V	
		(E, EA, MX, AUS, SP, MY)		C806	1-124-122-11	ELECT	100uF 20% 50V	
CN903	1-564-321-00	PIN, CONNECTOR 2P		C807	1-124-916-11	ELECT	22uF 20% 63V	
△CNP900	1-526-930-11	INLET, AC ( $\sim$ AC IN) (E, EA, MX)		C808	1-124-916-11	ELECT	22uF 20% 63V	
△CNP900	1-526-931-11	INLET, AC ( $\sim$ AC IN)		C809	1-164-159-11	CERAMIC	0.1uF 50V	
		(AEP, UK, G, IT, AUS, MY, SP)		C810	1-136-163-00	FILM	0.068uF 5% 50V	
		< DIODE >		C811	1-136-163-00	FILM	0.068uF 5% 50V	
D900	8-719-987-63	DIODE	1N4148M	C812	1-124-910-11	ELECT	47uF 20% 50V	
		< FUSE >		C831	1-161-379-00	CERAMIC	0.01uF 20% 25V	
△F901	1-532-259-00	FUSE (T1.6A) (AEP, UK, G, IT)		C832	1-161-379-00	CERAMIC	0.01uF 20% 25V	
△F901	1-532-285-00	FUSE (T1.25A) (E, EA, MX, AUS, SP, MY)		C851	1-124-257-00	ELECT	2.2uF 20% 50V	
△F902	1-532-286-00	FUSE (T2.5A) (E, EA, MX, AUS, SP, MY)		C853	1-162-282-31	CERAMIC	100PF 10% 50V	
△F903	1-532-286-00	FUSE (T2.5A)		C854	1-124-910-11	ELECT	47uF 20% 50V	
		< RELAY >		C855	1-124-910-11	ELECT	47uF 20% 50V	
△RY901	1-515-738-11	RELAY, POWER		C856	1-124-122-11	ELECT	100uF 20% 50V	
		< SWITCH >		C857	1-124-916-11	ELECT	22uF 20% 63V	
△S901	1-572-675-11	SWITCH, POWER VOLTAGE CHANGE		C860	1-136-163-00	FILM	0.068uF 5% 50V	
		(E, EA, MX, AUS, SP, MY)		C861	1-136-163-00	FILM	0.068uF 5% 50V	
		< CONNECTOR >		* CN803	1-569-499-11	PIN, CONNECTOR 3P		
		< DIODE >		D801	8-719-987-63	DIODE	1N4148M	
				D851	8-719-987-63	DIODE	1N4148M	

## AMPLIFIER

## BACK PANEL

## COVER (A)

## COVER (B)

Ref. No.	Part No.	Description	Remark	Ref. No.	Part No.	Description	Remark								
< IC >															
IC801	8-749-920-10	IC STK4172MK2		R856	1-249-425-11	CARBON	4.7K 5% 1/4W F								
< COIL >															
L801	1-420-872-00	COIL, AIR CORE		R857	1-249-425-11	CARBON	4.7K 5% 1/4W F								
L851	1-420-872-00	COIL, AIR CORE		R858	1-249-425-11	CARBON	4.7K 5% 1/4W F								
< TRANSISTOR >															
Q801	8-729-140-84	TRANSISTOR 2SC1841-PAFAEA		△R859	1-212-881-11	FUSIBLE	100 5% 1/4W F								
Q802	8-729-900-36	TRANSISTOR DTC124ES		△R860	1-217-151-00	RES, METAL PLATE 0.22	2W								
Q803	8-729-620-05	TRANSISTOR 2SC2603-EF		R861	1-249-417-11	CARBON	1K 5% 1/4W F								
Q851	8-729-140-84	TRANSISTOR 2SC1841-PAFAEA		R862	1-249-431-11	CARBON	15K 5% 1/4W								
< RESISTOR >				R863	1-249-441-11	CARBON	100K 5% 1/4W								
R801	1-249-417-11	CARBON	1K 5% 1/4W F	R868	1-249-397-11	CARBON	22 5% 1/4W F								
R802	1-249-438-11	CARBON	56K 5% 1/4W	R869	1-249-397-11	CARBON	22 5% 1/4W F								
R803	1-249-414-11	CARBON	560 5% 1/4W F	R870	1-249-397-11	CARBON	22 5% 1/4W F								
R804	1-249-438-11	CARBON	56K 5% 1/4W	R871	1-249-397-11	CARBON	22 5% 1/4W F								
R805	1-249-425-11	CARBON	4.7K 5% 1/4W F	*****											
R806	1-249-425-11	CARBON	4.7K 5% 1/4W F	* 1-651-461-11	BACK PANEL BOARD			*****							
R807	1-249-425-11	CARBON	4.7K 5% 1/4W F	< CAPACITOR >											
R808	1-249-425-11	CARBON	4.7K 5% 1/4W F	C11	1-164-159-11	CERAMIC	0.1uF 50V								
△R809	1-212-881-11	FUSIBLE	100 5% 1/4W F	< CONNECTOR >											
△R810	1-217-151-00	RES, METAL PLATE 0.22	2W	* CN11	1-580-740-11	SOCKET, CONNECTOR 17P (SYSTEM CONTROL)									
R811	1-249-417-11	CARBON	1K 5% 1/4W F	* CN12	1-568-834-11	SOCKET, CONNECTOR 15P									
R812	1-249-431-11	CARBON	15K 5% 1/4W	* CN13	1-564-518-11	PLUG, CONNECTOR 3P									
R813	1-249-441-11	CARBON	100K 5% 1/4W	*****											
R814	1-249-421-11	CARBON	2.2K 5% 1/4W F	* 1-651-464-11	COVER (A) BOARD			*****							
R815	1-249-421-11	CARBON	2.2K 5% 1/4W F	*****											
R816	1-249-421-11	CARBON	2.2K 5% 1/4W F	* 1-651-465-11	COVER (B) BOARD			*****							
R817	1-249-421-11	CARBON	2.2K 5% 1/4W F	< CONNECTOR >											
R818	1-249-397-11	CARBON	22 5% 1/4W F	CN804	1-569-490-11	SOCKET, CONNECTOR 3P									
R819	1-249-397-11	CARBON	22 5% 1/4W F	*****											
R820	1-249-397-11	CARBON	22 5% 1/4W F	R821	1-249-397-11	CARBON	22 5% 1/4W F								
R822	1-249-429-11	CARBON	10K 5% 1/4W	R823	1-247-881-00	CARBON	120K 5% 1/4W								
R823	1-247-881-00	CARBON	120K 5% 1/4W	R824	1-249-437-11	CARBON	47K 5% 1/4W								
R824	1-249-437-11	CARBON	47K 5% 1/4W	R825	1-249-417-11	CARBON	1K 5% 1/4W F								
R825	1-249-417-11	CARBON	1K 5% 1/4W F	R826	1-249-439-11	CARBON	68K 5% 1/4W								
R826	1-249-439-11	CARBON	68K 5% 1/4W	R827	1-249-437-11	CARBON	47K 5% 1/4W								
R827	1-249-437-11	CARBON	47K 5% 1/4W	R828	1-249-426-11	CARBON	5.6K 5% 1/4W								
R828	1-249-426-11	CARBON	5.6K 5% 1/4W	R829	1-249-433-11	CARBON	22K 5% 1/4W								
R829	1-249-433-11	CARBON	22K 5% 1/4W	△R830	1-212-934-00	RES, FUSE	1 5% 1/2W F								
R830	1-212-934-00	RES, FUSE	1 5% 1/2W F	R851	1-249-417-11	CARBON	1K 5% 1/4W F								
R851	1-249-417-11	CARBON	1K 5% 1/4W F	R852	1-249-438-11	CARBON	56K 5% 1/4W								
R852	1-249-438-11	CARBON	56K 5% 1/4W	R853	1-249-414-11	CARBON	560 5% 1/4W F								
R853	1-249-414-11	CARBON	560 5% 1/4W F	R854	1-249-438-11	CARBON	56K 5% 1/4W								
R854	1-249-438-11	CARBON	56K 5% 1/4W	R855	1-249-425-11	CARBON	4.7K 5% 1/4W F								
R855	1-249-425-11	CARBON	4.7K 5% 1/4W F												

The components identified by mark  $\Delta$  or dotted line with mark  $\Delta$  are critical for safety.  
Replace only with part number specified.

<u>Ref. No.</u>	<u>Part No.</u>	<u>Description</u>			<u>Remark</u>	<u>Ref. No.</u>	<u>Part No.</u>	<u>Description</u>			<u>Remark</u>
*	A-4369-239-A	MAIN BOARD, COMPLETE (AEP) *****						< DIODE >			
*	A-4369-240-A	MAIN BOARD, COMPLETE (UK) *****				D601	8-719-987-63	DIODE	1N4148M		
*	A-4369-241-A	MAIN BOARD, COMPLETE (G, IT) *****				D602	8-719-987-63	DIODE	1N4148M		
*	A-4369-242-A	MAIN BOARD, COMPLETE (E, EA, MX, AUS, SP, MY) *****				D605	8-719-987-63	DIODE	1N4148M		
		< CAPACITOR >				D606	8-719-987-63	DIODE	1N4148M		
C101	1-124-907-11	ELECT	10uF	20%	50V	D621	8-719-987-63	DIODE	1N4148M		
C102	1-124-907-11	ELECT	10uF	20%	50V	D622	8-719-987-63	DIODE	1N4148M		
C151	1-124-907-11	ELECT	10uF	20%	50V	D623	8-719-001-91	DIODE	UZL-15M		
C152	1-124-907-11	ELECT	10uF	20%	50V	D624	8-719-987-63	DIODE	1N4148M		
C601	1-126-176-11	ELECT	220uF	20%	10V	D625	8-719-987-63	DIODE	1N4148M		
C602	1-126-176-11	ELECT	220uF	20%	10V	D626	8-719-987-63	DIODE	1N4148M		
C603	1-124-925-11	ELECT	2. 2uF	20%	100V	D627	8-719-200-82	DIODE	11ES2		
C604	1-124-443-00	ELECT	100uF	20%	10V	D901	8-719-510-68	DIODE	D5SBA20F01		
C611	1-124-916-11	ELECT	22uF	20%	63V	D902	8-719-987-63	DIODE	1N4148M		
C612	1-124-916-11	ELECT	22uF	20%	63V	D903	8-719-987-63	DIODE	1N4148M		
C613	1-124-916-11	ELECT	22uF	20%	63V	D911	8-719-200-02	DIODE	10E2		
C614	1-124-916-11	ELECT	22uF	20%	63V	D912	8-719-200-02	DIODE	10E2		
C621	1-124-907-11	ELECT	10uF	20%	50V	D913	8-719-200-02	DIODE	10E2		
C622	1-124-907-11	ELECT	10uF	20%	50V	D914	8-719-200-02	DIODE	10E2		
C901	1-126-138-11	ELECT	4700uF	20%	50V	D951	8-719-200-02	DIODE	10E2		
C902	1-126-138-11	ELECT	4700uF	20%	50V	D952	8-719-200-02	DIODE	10E2		
C903	1-136-165-00	FILM	0. 1uF	5%	50V						
C904	1-136-165-00	FILM	0. 1uF	5%	50V						
C911	1-124-557-11	ELECT	1000uF	20%	25V						
C912	1-124-557-11	ELECT	1000uF	20%	25V						
C913	1-136-153-00	FILM	0. 01uF	5%	50V						
C914	1-136-153-00	FILM	0. 01uF	5%	50V						
C915	1-124-907-11	ELECT	10uF	20%	50V						
C916	1-124-907-11	ELECT	10uF	20%	50V						
C917	1-126-935-11	ELECT	470uF	20%	16V						
C918	1-126-935-11	ELECT	470uF	20%	16V						
C951	1-126-768-11	ELECT	2200uF	20%	16V						
C952	1-124-463-00	ELECT	0. 1uF	20%	50V						
C953	1-162-294-31	CERAMIC	0. 001uF	10%	50V						
C954	1-124-443-00	ELECT	100uF	20%	10V						
		< CONNECTOR >									
* CN101	1-568-834-11	SOCKET, CONNECTOR 15P				R101	1-249-429-11	CARBON	10K	5%	1/4W
CN102	1-564-505-11	PLUG, CONNECTOR 2P				R102	1-249-429-11	CARBON	10K	5%	1/4W
CN103	1-568-838-11	SOCKET, CONNECTOR 21P				R103	1-249-429-11	CARBON	10K	5%	1/4W
CN105	1-691-770-11	PLUG (MICRO CONNECTOR) 8P				R104	1-249-429-11	CARBON	10K	5%	1/4W
CN107	1-691-766-11	PLUG (MICRO CONNECTOR) 4P				R105	1-247-807-31	CARBON	100	5%	1/4W
						R151	1-249-429-11	CARBON	10K	5%	1/4W
						R152	1-249-429-11	CARBON	10K	5%	1/4W
						R153	1-249-429-11	CARBON	10K	5%	1/4W
						R154	1-249-429-11	CARBON	10K	5%	1/4W

**MAIN PANEL**

The components identified by mark  or dotted line with mark  are critical for safety.  
Replace only with part number specified.

**PANEL**

Ref. No.	Part No.	Description	Remark	Ref. No.	Part No.	Description	Remark
<b>&lt; DIODE &gt;</b>							
D201	8-719-987-63	DIODE	1N4148M	R208	1-249-429-11	CARBON	10K 5% 1/4W
D501	8-719-200-82	DIODE	11ES2	R209	1-247-807-31	CARBON	100 5% 1/4W
D502	8-719-987-63	DIODE	1N4148M	R211	1-249-418-11	CARBON	1.2K 5% 1/4W F
D511	8-719-032-83	DIODE	SEL5220S (PHONO)	R212	1-249-435-11	CARBON	33K 5% 1/4W
D512	8-719-032-83	DIODE	SEL5220S (TUNER)	R213	1-247-895-00	CARBON	470K 5% 1/4W
D513	8-719-032-83	DIODE	SEL5220S (CD)	R214	1-249-429-11	CARBON	10K 5% 1/4W
D514	8-719-032-83	DIODE	SEL5220S (MD/DAT)	R215	1-249-417-11	CARBON	1K 5% 1/4W F
D515	8-719-032-83	DIODE	SEL5220S (TAPE)	R231	1-249-441-11	CARBON	100K 5% 1/4W
D516	8-719-032-83	DIODE	SEL5220S (VIDEO)	R232	1-249-417-11	CARBON	1K 5% 1/4W F
D517	8-719-032-83	DIODE	SEL5220S (ON/STANDBY)	R233	1-249-431-11	CARBON	15K 5% 1/4W
D518	8-719-032-83	DIODE	SEL5220S (-20dB MUTING)	R234	1-249-441-11	CARBON	100K 5% 1/4W
D551	8-719-200-82	DIODE	11ES2	R235	1-249-417-11	CARBON	1K 5% 1/4W F
				R236	1-249-434-11	CARBON	27K 5% 1/4W
<b>&lt; IC &gt;</b>							
IC201	8-759-634-50	IC	M5218AL	R237	1-249-441-11	CARBON	100K 5% 1/4W
IC231	8-759-634-50	IC	M5218AL	R238	1-249-441-11	CARBON	100K 5% 1/4W
IC501	8-759-192-72	IC	MC68HC05P9-SC405679B	R239	1-249-417-11	CARBON	1K 5% 1/4W F
IC502	8-759-917-43	IC	SN74HC138AN	R240	1-249-409-11	CARBON	220 5% 1/4W F
IC503	8-749-923-43	IC	GP1U57XB	R241	1-249-409-11	CARBON	220 5% 1/4W F
IC551	8-759-184-40	IC	LB1638	R251	1-249-429-11	CARBON	10K 5% 1/4W
				R252	1-249-417-11	CARBON	1K 5% 1/4W F
				R253	1-249-429-11	CARBON	10K 5% 1/4W
				R254	1-249-441-11	CARBON	100K 5% 1/4W
				R255	1-249-427-11	CARBON	6.8K 5% 1/4W F
<b>&lt; JACK &gt;</b>							
J201	1-764-106-11	JACK (MIX MIC)		R256	1-249-417-11	CARBON	1K 5% 1/4W F
J202	1-764-106-11	JACK (HEADPHONES)		R257	1-249-429-11	CARBON	10K 5% 1/4W
<b>&lt; TRANSISTOR &gt;</b>							
Q201	8-729-141-30	TRANSISTOR	2SC3623A-LK	R258	1-249-441-11	CARBON	100K 5% 1/4W
Q202	8-729-141-30	TRANSISTOR	2SC3623A-LK	R259	1-249-441-11	CARBON	100K 5% 1/4W
Q203	8-729-900-69	TRANSISTOR	DTA144WS	R261	1-249-418-11	CARBON	1.2K 5% 1/4W F
Q211	8-729-620-05	TRANSISTOR	2SC2603-EF	R262	1-249-435-11	CARBON	33K 5% 1/4W
Q251	8-729-141-30	TRANSISTOR	2SC3623A-LK	R263	1-247-895-00	CARBON	470K 5% 1/4W
				R264	1-249-429-11	CARBON	10K 5% 1/4W
				R265	1-249-417-11	CARBON	1K 5% 1/4W F
				R501	1-247-903-00	CARBON	1M 5% 1/4W
Q252	8-729-141-30	TRANSISTOR	2SC3623A-LK	R502	1-249-429-11	CARBON	10K 5% 1/4W
Q261	8-729-620-05	TRANSISTOR	2SC2603-EF	R503	1-249-429-11	CARBON	10K 5% 1/4W
Q501	8-729-620-05	TRANSISTOR	2SC2603-EF	R504	1-249-417-11	CARBON	1K 5% 1/4W F
Q502	8-729-900-63	TRANSISTOR	DTA124ES	R505	1-249-429-11	CARBON	10K 5% 1/4W
Q503	8-729-900-36	TRANSISTOR	DTC124ES	R506	1-249-393-11	CARBON	10 5% 1/4W F
Q504	8-729-900-36	TRANSISTOR	DTC124ES	R507	1-249-417-11	CARBON	1K 5% 1/4W F
Q505	8-729-900-63	TRANSISTOR	DTA124ES	R508	1-249-417-11	CARBON	1K 5% 1/4W F
Q506	8-729-900-63	TRANSISTOR	DTA124ES	R510	1-249-417-11	CARBON	1K 5% 1/4W F
<b>&lt; RESISTOR &gt;</b>							
R201	1-249-429-11	CARBON	10K 5% 1/4W	R511	1-249-417-11	CARBON	1K 5% 1/4W F
R202	1-249-417-11	CARBON	1K 5% 1/4W F	R512	1-249-417-11	CARBON	1K 5% 1/4W F
R203	1-249-429-11	CARBON	10K 5% 1/4W	R513	1-249-417-11	CARBON	1K 5% 1/4W F
R204	1-249-441-11	CARBON	100K 5% 1/4W	R515	1-247-811-31	CARBON	150 5% 1/4W
R205	1-249-427-11	CARBON	6.8K 5% 1/4W F	R516	1-249-417-11	CARBON	1K 5% 1/4W F
				R517	1-247-811-31	CARBON	150 5% 1/4W
				R518	1-249-429-11	CARBON	10K 5% 1/4W
R206	1-249-417-11	CARBON	1K 5% 1/4W F	R520	1-249-422-11	CARBON	2.7K 5% 1/4W F
R207	1-249-429-11	CARBON	10K 5% 1/4W	R521	1-249-424-11	CARBON	3.9K 5% 1/4W F

PANEL	SPEAKER	TRANSFORMER (A)	TRANSFORMER (B)
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Ref. No.	Part No.	Description	Remark
R522	1-249-427-11	CARBON	6.8K 5% 1/4W F
R527	1-249-429-11	CARBON	10K 5% 1/4W
R530	1-247-811-31	CARBON	150 5% 1/4W
< VARIABLE RESISTOR >			
RV201	1-223-200-11	RES, VAR, CARBON	10K/100K/100K (VOLUME)
RV211	1-223-336-11	RES, VAR, CARBON	50K/50K (LEVEL)
RV212	1-223-201-11	RES, VAR, CARBON	100K/100K (FREQUENCY)
RV231	1-241-813-11	RES, VAR, CARBON	50K (MIC LEVEL)
< SWITCH >			
S501	1-572-184-11	SWITCH, KEYBOARD	(SYSTEM POWER)
S502	1-572-184-11	SWITCH, KEYBOARD	(-20dB MUTING)
S503	1-572-184-11	SWITCH, KEYBOARD	(FUNCTION >)
S504	1-572-184-11	SWITCH, KEYBOARD	(FUNCTION <)
< VIBRATOR >			
X501	1-577-358-21	VIBRATOR, CERAMIC	(4MHz)
*****			
*	1-651-460-11	SPEAKER BOARD	*****
< CAPACITOR >			
C891	1-164-159-11	CERAMIC	0.1uF 50V (G, IT)
C892	1-164-159-11	CERAMIC	0.1uF 50V (G, IT)
< CONNECTOR >			
* CN401	1-564-520-11	PLUG, CONNECTOR	5P
< JACK >			
J401	1-568-572-11	JACK, PIN 2P	(SURROUND SPEAKER)
< RESISTOR >			
R891	1-249-397-11	CARBON	22 5% 1/4W F (G, IT)
R892	1-249-397-11	CARBON	22 5% 1/4W F (G, IT)
R893	1-249-397-11	CARBON	22 5% 1/4W F (G, IT)
R894	1-249-397-11	CARBON	22 5% 1/4W F (G, IT)
< TERMINAL >			
TB401	1-537-445-11	TERMINAL BOARD (SP)	(SPEAKER)
*****			

Ref. No.	Part No.	Description	Remark
*	1-651-462-11	TRANSFORMER (A) BOARD	*****
*****			
*	1-651-463-11	TRANSFORMER (B) BOARD	*****
*****			
MISCELLANEOUS			
*****			
7	1-765-194-11	WIRE (FLAT TYPE) (21 CORE)	
12	1-765-192-11	WIRE (FLAT TYPE) (15 CORE)	
14	1-751-216-31	LEAD (WITH CONNECTOR) (2 CORE)	
△CNJ904	1-526-794-11	OUTLET, AC	
△F901	1-532-259-00	FUSE (T1.6A) (AEP, UK, G, IT)	
△F901	1-532-285-00	FUSE (T1.25A) (E, AUS, EA, MY, SP, MX)	
△F902	1-532-286-00	FUSE (T2.5A) (E, AUS, EA, MY, SP, MX)	
△F903	1-532-286-00	FUSE (T2.5A)	
M601	1-541-953-11	MOTOR, DC FAN	
△T901	1-426-683-11	TRANSFORMER, POWER (AEP, G, IT)	
△T901	1-426-684-11	TRANSFORMER, POWER (UK)	
△T901	1-426-685-11	TRANSFORMER, POWER (E, AUS, EA, MY, SP, MX)	
*****			
*****			
#1	7-685-647-79	SCREW +BVTP 3X10 TYPE2 N-S	
#2	7-685-650-79	SCREW +BVTP 3X16 TYPE2 IT-3	
#3	7-682-547-09	SCREW +BVTT 3X6 (S)	
#4	7-682-548-04	SCREW +BVTT 3X8 (S)	
*****			
HARDWARE LIST			
*****			

The components identified by mark  $\Delta$  or dotted line with mark  $\Delta$  are critical for safety.  
Replace only with part number specified.

Sony Corporation  
Consumer A&V Products Company  
Home A&V Division

English

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